

**G042**  
**1,3-Dioxolane [646-06-0]**

**Results of Testing**

Chemical Name	CAS No.	Study Code/Type	Protocol/Guideline	Species	Exposure	Dose/Concentration	No. per Group	Results	Reference
1,3-Dioxolane	646-06-0	HECTOX Chronic Toxicity - Study Audit	Non-TSCA Protocol/ Guideline	rats	oral (drinking water), <i>ad libitum</i> , 2 years	0, 0.03, 0.1%	Not specified	The audit concluded that the study contains accurate toxicological information concerning the effects of dioxolane administered to the drinking water of male and female rats. The study had concluded that there were no statistically-significant treatment-related effects in body weight or food and water consumption. A slight reduction in testicular weights and an increase in spleen weights in treated male rats was not statistically-significant.	51 FR 6468; 2/24/86, Docket# OPTS- 44014
1,3-Dioxolane	646-06-0	HEGTOXCHRM Chromosomal aberrations	Non-TSCA Protocol/ Guideline (docket OPTS-42041)	Chinese hamster ovary (CHO)	<i>in vitro</i>	0, 2.0, 3.0, 4.0, 5.0 mg/mL	Not specified	There was no toxicity observed at the highest dose level in either the nonactivated or activated cultures. No evidence of increased frequency of chromosome aberrations was noted in either the nonactivated or activated systems compared to the negative controls.	50 FR 31919; 8/7/85, OTS0511019
1,3-Dioxolane	646-06-0	HEGTOXMUTA Mutagenicity study	Non-TSCA Protocol/ Guideline (docket OPTS-42041)	mouse	<i>in vitro</i>	750-5000 nL/mL	Not applicable	L5178YTK cell viability ranged from 85-61% in non-activated cultures and 77.8-95.1% in the S9-activated cultures relative to controls. None of the cultures had mutation frequencies significantly greater than the solvent control (water).	50 FR 31919; 8/7/85, OTS0511019
1,3-Dioxolane	646-06-0	HEGTOXTRFM Cell transformation study	Non-TSCA Protocol/ Guideline (docket OPTS-42041)	mouse	<i>in vitro</i>	1000-5000 nL/mL	Not applicable	There was no significant increase in the appearance of transformed foci in Balb/C-3T3 cells over the test concentration range.	FR 50 FR31919; 8/7/85, OTS0511019
1,3-Dioxolane	646-06-0	HESTOX Subchronic study	Non-TSCA Protocol/ Guideline (docket OPTS-42041)	rat	oral (drinking water), 4 weeks	0, 0.5, 1, 2% (v/v)	5 male; 5 female	In the 2% treated groups (both males and females) and the 1% treated males, there were statistically significant decreases in body weight gain relative to the controls.	51 FR 6468; 2/24/86, OTS0510995